

Civil Report Card On GPS Performance

December 2006

Operational Performance Parameter	CY 2005	Nov 2006	Dec 2006	Long term	Short term
Availability Parameters					
<i>Average Number of satellites usable</i>	28.93	28.15	28.82	↓	↑
<i>Average number of satellites usable in primary slots</i>	23.80 (99.17%)	23.16 (96.49%)	23.82 (99.26%)	→	↑
<i>Average availability of 6 satellites in view</i>	TBD%	99.99%	99.99%		→
99.99% Horizontal DOP					
<i>Area Median</i>	2.1	1.9	1.6	↑	↑
<i>Worst Site</i>	4.1	5.2	3.7	↑	↑
99.99% Vertical DOP					
<i>Area Median</i>	3.8	3.6	3.0	↑	↑
<i>Worst Site</i>	5.6	13.2	7.2	↓	↑
99.99% Position DOP (PDOP)					
<i>Area Median</i>	4.1	4.0	3.4	↑	↑
<i>Worst Site</i>	6.0	14.1	7.9	↓	↑
Accuracy Parameters					
RMS Single Frequency User Range Error					
<i>Constellation Median</i>	1.77 *	1.94	1.94	→	→
<i>Worst Satellite</i>	2.22 *	2.78	2.68	↓	→
95% Horizontal Error					
<i>Area Median</i>	3.44	2.70	2.46	↑	↑
<i>Worst Site</i>	6.04	4.87	4.28	↑	↑
<i>Availability (% <4.5m (historical 3-sigma))</i>	99.67%	99.21%	99.74%	→	↑
95% Vertical Error					
<i>Area Median</i>	5.83	5.03	5.24	↑	→
<i>Worst Site</i>	7.43	6.21	7.08	↑	↓
<i>Availability (% < 9m (historical 3-sigma))</i>	99.93%	99.85%	99.80%	↓	→

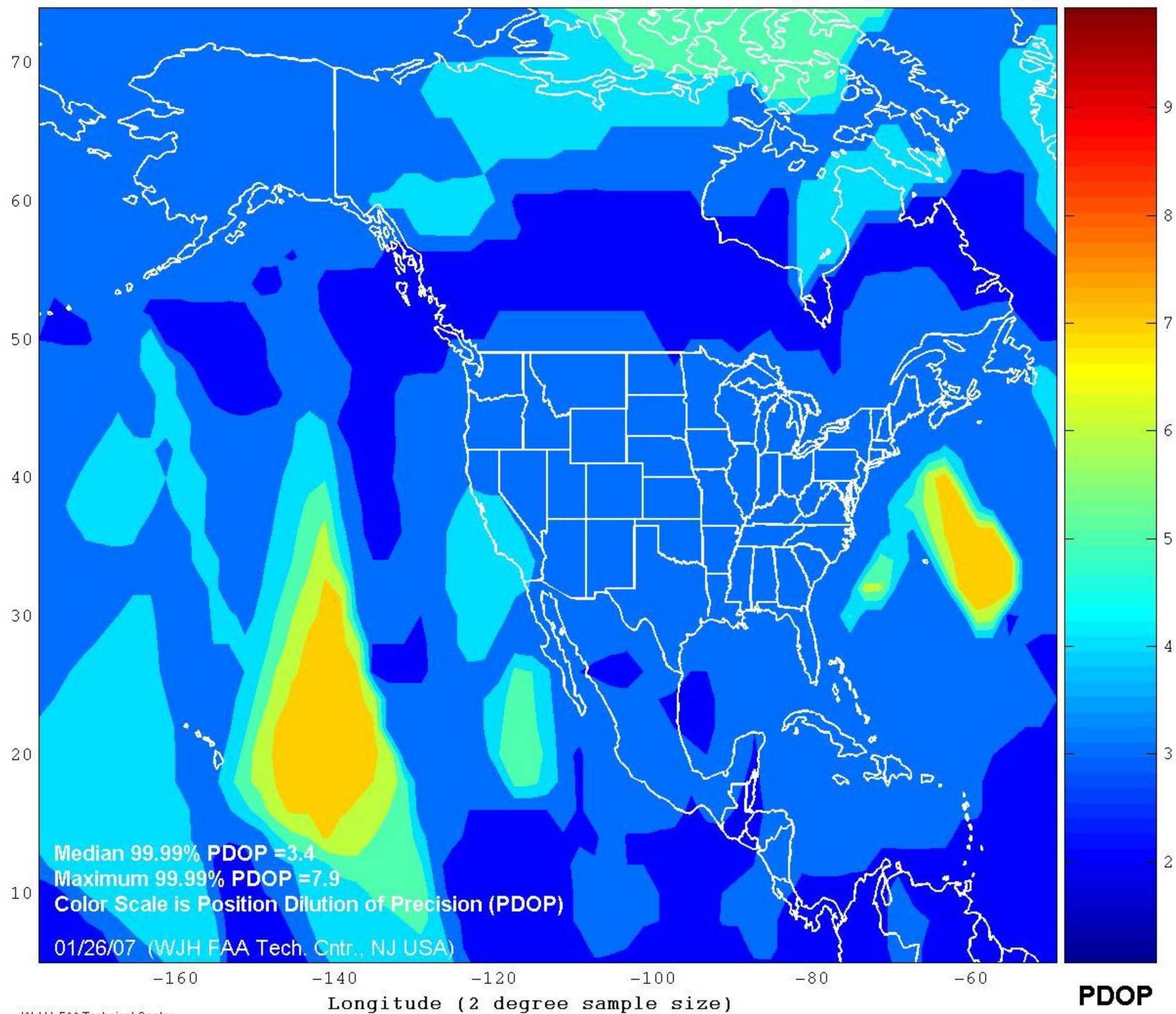
Key: ↑ improving ↓ worsening → no significant change

* CY 2006 (1 Jan – 31 August 2006)

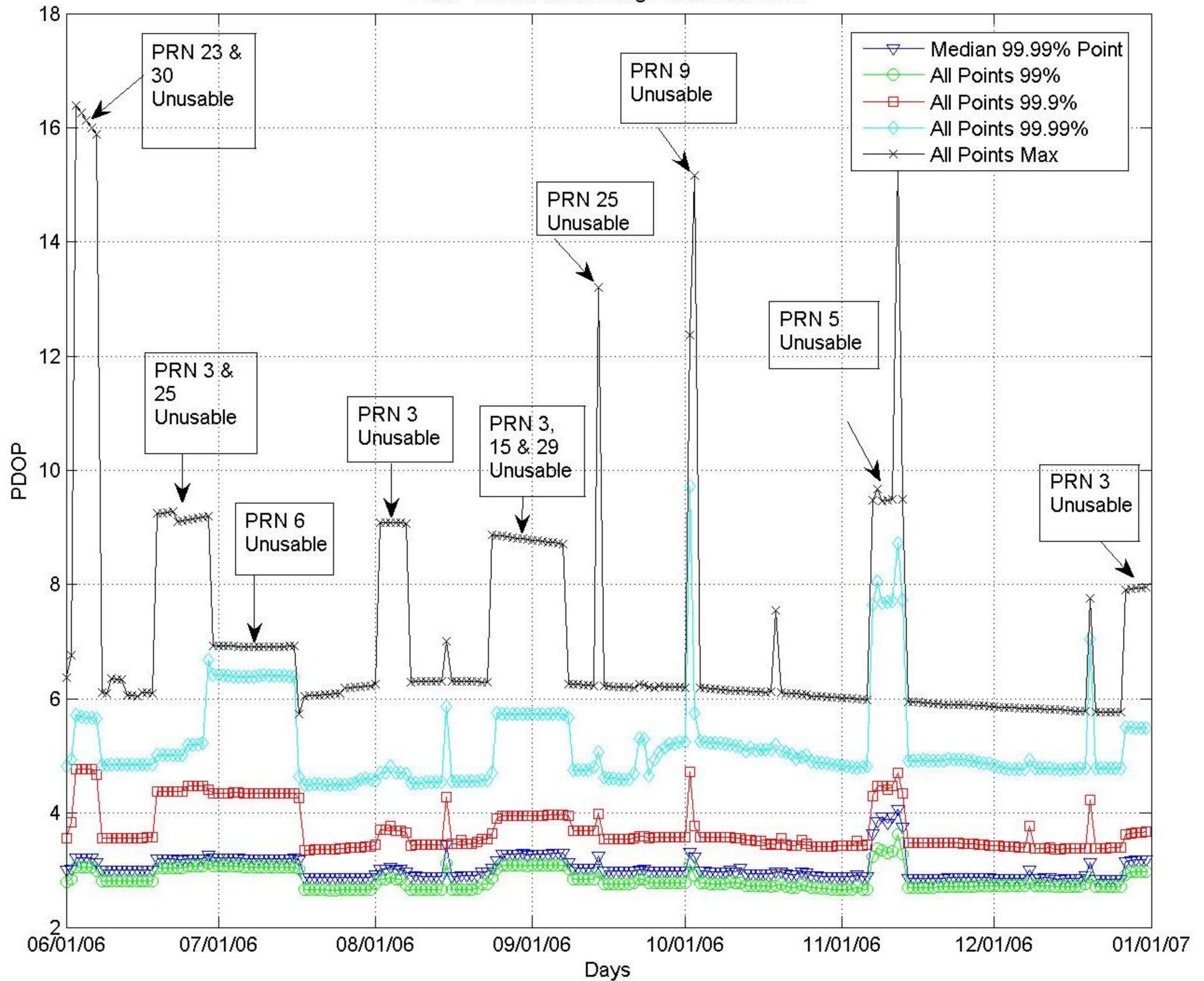
Long Term is current month vs. prior 24 months, Short Term is current month vs. prior month

Compiled from WAAS network as requested by the Defense Science Board

North America GPS PDOP 99.99% Index December 2006



PDOP Trends June through December 2006



Six Satellite Availability Trends June through December 2006

